

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No. 10/009,896

REMARKS

The present invention relates to polyester irregular cross-sectional filaments having specific defined characteristics.

In the Office Action of August 7, 2003, claims 1-3 were rejected and claims 4-13 were objected to. More particularly, claims 4-13 were objected to as being in improper form because a multiple dependent claim cannot depend upon another multiple claim. Claims 1-3 were rejected under 35 U.S.C. § 112, including particularly with respect to the recitation “which cross-sectional profile” at lines 9-10 of claim 1 was considered unclear as to what it referred to by the Examiner. Lastly, claims 1-2 were rejected under 35 U.S.C. § 102(b) based on U.S. Patent 2,816,349 (Pamm et al), which the Examiner considered disclosing a fiber having a triangular end with a flat projection.

In response, claims 4-13 have been amended such that no claims are now improperly multiply dependent; further in this regard, certain embodiments that were within the intended scope of the previous multiple dependent claims have been claimed in new claims 14-17.

Also in reviewing the application, it has been noted that in Fig. 4, the number 15 was used to refer to different features. First, at the bottom of Fig. 4, 15 was used to refer to the spinneret; see the corresponding description in the paragraph at page 15, lines 10 *et seq.* of the specification. Then, reference was made to “side 15” of the structure. In order to clarify the use of the number 15, in the second instance, it is proposed to amend Fig. 4 and amend the paragraph

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describing Fig. 4 at page 15 of the specification to refer to the “side” by use of the designation --15a--. Entry of this proposed amendment is respectfully submitted to the proper to improve the clarity of the embodiment illustrated in Fig. 4 and correspondingly described at page 15 of the specification. No new matter is introduced.

With respect to the rejection under 35 U.S.C. § 112, claim 1 has been amended to improve the clarity thereof, *viz.*, clarifying that the reference to the cross-sectional profile noted by the Examiner is that of each individual filament. Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. § 112 has been obviated.

Turning to the prior art rejection, it is believed that it would be beneficial, first, to review in detail the specific features of the polyester irregular cross-sectional filaments in accordance with the present invention.

The polyester irregular cross-sectional filaments of the present invention must be provided with the following features (I) and (II):

(I) Each individual filament has a transverse cross-sectional profile having a triangular part having

(A) a triangular part having a triangular form and

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(B) a flat projection part connected to an angular portion of the triangular part and extending therefrom in a flat form.

It is noted that the specific irregular transverse cross-sectional profile of the present invention is of each individual filament, not that of the melt-spinning opening for producing the individual filament. The irregular cross-sectional profile of the melt-spinning opening is not the same as that of the resultant irregular cross-sectional melt-spun filament, due to a surface tensions of the melt stream extruded through the melt-spinning opening. To produce a melt-spun filament having a irregular cross-sectional profile as shown in Fig. 1 of the present invention, the melt-spinning orifice hole must have a cross-sectional profile as shown in Fig. 4 of the present invention.

If a polymer melt is extruded through a melt spinning opening having the same irregular cross-sectional profile as in Fig. 1, in the cross-sectional profile of the resultant filament, the side of the triangular part facing the connection portion must expand outward, and thus the target triangular part cannot be formed.

The Pamm reference (U.S. Patent 2,816,349) shows various orifice outlines in Figs. I to IX. In a comparison of Figs. VI to IX showing cross-sectional profiles of orifices with Figs. Vla to Ixa showing cross-sectional profile of resultant filaments, it is clear that the cross-sectional profiles of the orifices are not the same as those of the resultant filaments.

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Fig. IV of the Pamm reference shows a cross-sectional profile of an orifice, but not of a resultant filament. This orifice of Pamm cannot form the filaments as defined in the claim 1 of the present application, for the reasons mentioned above.

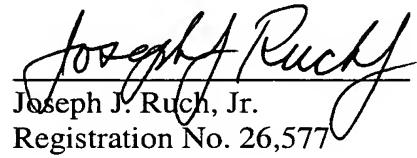
Also, the cross-sectional profile of the orifice of Fig. IV has two head parts connected to a flat part, and the ratio L1/L2 is more than 3.0. Therefore, Pamm clearly does not anticipate the present invention. Accordingly, the invention of Pamm is definitely different from, and does not teach, or suggest the specific invention as defined in claim 1 of the present application.

In view of the above, reconsideration and allowance of pending claims 1-17 of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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Annotated marked-up Drawings

Fig. 4

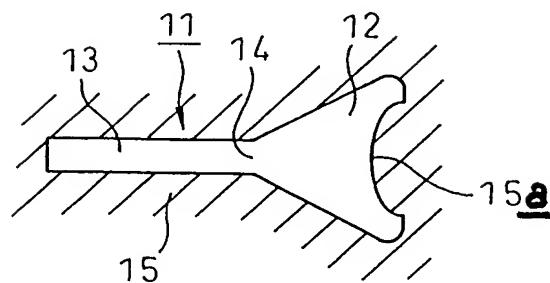


Fig. 5

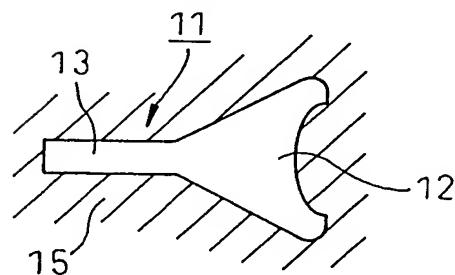


Fig. 6

